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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,587	02/22/2007	Tetsuro Sato	3209-111	2274

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GREENBLUM & BERNSTEIN, P.L.C.
1950 Roland Clarke Place
Reston, VA 20191

EXAMINER

JACKSON, MONIQUE R

ART UNIT	PAPER NUMBER
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1787

MAIL DATE	DELIVERY MODE
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06/07/2011

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/565,587	Applicant(s) SATO ET AL.	
	Examiner MONIQUE JACKSON	Art Unit 1787	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5,6,8-11,13,14 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5,6,8-11,13,14 and 16-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. The amendment filed 3/22/11 has been entered. Claims 1-3, 5, 6, 8-11, 13, 14, and 16-18 are pending in the application. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

2. Claims 1-3, 5, 6, 8-11, 13, 14 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Poutasse *II* in view of Komiyatani et al or Hosagane et al, and in further view of JP 10-190225 (JP'225) or JP 11-148053 (JP'053), for the reasons recited in the prior office actions wherein Komiyatani et al provides a suggestion to incorporate a polyethersulfone as instantly claimed in the epoxy resin adhesive taught by Poutasse *II* within the claimed content range or Hosagane et al provides a suggestion to incorporate an aromatic polyamide polymer in the epoxy resin adhesive taught by Poutasse *II* within the claimed content range, but Poutasse *II* in view of Komiyatani et al or Hosagane et al do not teach that the thin adhesive layer has a resin flow of 5% or less as instantly claimed. However, JP'225 and JP'053 both teach the benefit of having a resin flow within the claimed range for the adhesive layer on a copper foil utilized in producing printed wiring boards (JP'225, Paragraph 0009; JP'053, Paragraphs 0008-0009) and hence one having ordinary skill in the art at the time of the invention would have been motivated to modify the invention as taught by Poutasse *II* in view of Komiyatani et al or Hosagane et al such that the composition and viscosity of the adhesive layer was adjusted to provide a resin flow within the instantly claimed range. With respect to the claimed adhesive thickness, as discussed in a prior office action, Poutasse *II* teaches a preferred dry film weight of about 20 to about 50 g/m² but does not teach the instantly claimed thickness of 1 to 3 microns. However, the

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Examiner maintains her position that it is well established in the art that adhesion layer thickness is a result effective variable affecting the adhesion strength between the two surfaces to be adhered and that one having ordinary skill in the art at the time of the invention would have been motivated to utilize routine experimentation to determine the optimum adhesive dry film weight or thickness to provide the desired adhesion properties for a particular adhesive composition and end use while conserving material to reduce the thickness as appropriate, given the predictable results and reasonable expectation of success, wherein an adhesive thickness or weight within the same order of magnitude as taught by the prior art would have been obvious to one having ordinary skill in the art at the time of the invention.

Response to Arguments

3. Applicant's reply filed 3/22/11 has overcome the obviousness rejection over JP'648. Applicant's arguments filed 3/22/11 have been fully considered but they are not persuasive with respect to the obviousness rejection over Poutasse *II*. The Applicant argues that one skilled in the art would not be motivated to modify the epoxy composition of Poutasse *II* to obtain a specific gravity required to produce an adhesive film thickness within the claimed range having a dry film weight as taught by Poutasse *II*. However, the Examiner notes that the dry film weight taught by Poutasse *II* is a preferred range and is not required by the invention taught by Poutasse *II* and hence a thickness outside of this preferred range would not modify the invention taught by Poutasse *II* in a manner that would render it inoperable as argued by the Applicant. The Examiner maintains that in the absence of a clear showing of criticality or unexpected results with regards to the claimed adhesive layer thickness, one having ordinary skill in the art at the time of the invention would have been motivated to utilize routine experimentation to determine

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the optimum adhesive thickness to utilize wherein a thickness within the claimed range is of the same order of magnitude as that taught by the prior art and would have been obvious at the time of the invention. With regards to the resin flow limitation, the Examiner maintains that JP'225 and JP'053 provide motivation for one skilled in the art to utilize routine experimentation to modify the adhesive composition of Poutasse *II* to have a resin flow within the claimed range given the benefits taught by JP'225 and JP'053 with regards to a resin flow as claimed for the adhesive layer on a copper foil utilized in producing printed wiring boards. Hence, the Examiner maintains her position that the instant invention would have been obvious over the teachings of the prior art.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONIQUE JACKSON whose telephone number is (571)272-1508. The examiner can normally be reached on Mondays-Thursdays, 10:00AM-5:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on 571-272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Monique R Jackson/
Primary Examiner, Art Unit 1787
June 6, 2011